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Theoretical Basis of Activity-Based Cost Accounting System in Manufacturing Enterprises

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Abstract

The competitive environment is increasingly fierce, accounting information needs to be provided promptly and accurately to support managers in making decisions. Cost is always the top concern for administrators; Accurate and timely information about costs is a necessary basis for administrators to control costs and make effective business decisions in today's highly competitive and changing production and business environment. To improve

competitiveness, timely decision making and good cost management are some of the advantages that help them survive and develop. Finding factors and providing solutions to help apply activity-based cost accounting systems to manufacturing enterprises more effectively is necessary. This article explores the theoretical basis of the activity-based cost accounting system in manufacturing enterprises.

Keywords: Cost Accounting, Activity-Based Cost, Manufacturing Enterprises

1. Introduction

The competitive environment is increasingly fierce, accounting information needs to be provided promptly and accurately to support managers in making decisions. Cost is always the top concern for administrators; Accurate and timely information about costs is a necessary basis for administrators to control costs and make effective business decisions in today's highly competitive and changing production and business environment. These changes related to global competition and the application of new production technology have increased automation, machinery and equipment will replace direct labor, leading to changes in the cost structure of businesses., the proportion of indirect costs is increasing. This poses a requirement for accountants to accurately collect and allocate indirect costs to cost objects in order to have a basis for accurately determining the cost of products and services from which administrators can have a basis. Set selling prices to improve the competitiveness of businesses. The traditional cost accounting method of collecting and allocating indirect costs to cost objects according to criteria such as: number of direct labor hours, number of machine hours... does not show the relationship. The cause and effect relationship between allocated indirect costs and cost objects leads to inaccurate cost allocation and product and service prices.

To improve competitiveness, timely decision making and good cost management are some of the advantages that help them survive and develop. Finding factors and providing solutions to help apply activity-based cost accounting systems to manufacturing enterprises more effectively is necessary.

2. Activity-based cost accounting system

2.1 Historical development of activity-based cost accounting

The activity-based cost accounting system develops through four stages:

Stage 1: According to research by (Noreen, 1991)

As the initial stage of the activity-based cost accounting (ABC) system, there are still many limitations. During this stage, the activity-based cost accounting (ABC) system is mainly aimed at changing the approach approach of the traditional cost accounting system to improve and enhance the accuracy of costs.

- Activity-based cost accounting (ABC) system is only seen as a complex version of traditional cost accounting to address indirect costs in production related to many subjects with many problems, incomplete expertise.

- The activity-based cost accounting (ABC) system has only just begun to be formally researched in theory and applied in practice and the model structure has not yet been shaped.
- The activity-based cost accounting (ABC) system is only researched and developed as a model and applied to resolving cost information for decisions related to determining the profit of each product.

Stage 2: According to research by (Turney, 2010) ^[3]

The activity-based costing (ABC) model shifts from focusing on information about product costs to costs of production processes and business activities.

- Identify activities and the relationship between activities and costs to solve the problem of allocating general production costs more accurately.
- Identify the costs of the production process and business activities within the enterprise to come up with tactics and operations to improve production productivity, sales efficiency, and the efficiency of building distribution channels, effective in administration and operations.

Stage 3: According to research by (Kaplan, 2004), the activity-based cost accounting (ABC) model continues to be researched and expanded from the relationship between costs and activities taking place within and beyond. Outside the enterprise with the main purpose of finding the operational advantages of the enterprise to build a competitive strategy.

- Build an activity-based cost accounting system (ABC) on the basis of the entire activity system, redefine cost collection and allocation criteria, and maintain updated information related to the activity system. Dynamic when there are changes in the market, customers, production system, suppliers (economic resources used).
- Build an improved activity-based cost accounting (ABC) model to solve technical difficulties (identifying activities, updating activity changes), and economic (banking) limitations. Policies such as the activity-based costing (ABC) model adjusted according to time criteria (time - driven), Time - Driven Activity - Based Costing (TDABC) model of (Kaplan, 2007) to improve efficiency. Economical, feasible and connected to other management models such as enterprise-wide resource management, customer relationship management, or connecting to the website to create BI (Business Intelligence).

Stage 4:

The activity-based costing (ABC) model has become a key basic information channel about finance and the entire system of the enterprise to analyze strength, improve efficiency, measure and evaluate performance results. Specifically, the activity-based costing (ABC) model provides information to connect with the balanced scorecard to build goals, providing information to build flexible and more accurate estimates when changing. Change business plans, provide information to effectively manage human resources and labor in each job and activity.

There are many studies related to the origin of activity-based costing (ABC) systems.

According to research (Sarah, 2005), the concept of an

activity-based cost accounting system (ABC) existed in the form of "Activity Accounting" which appeared very early in the 1940s in the 20th century. Article on Activity Accounting, and is the foundation for developing the activity-based cost accounting (ABC) method later. By the late eighties of the last century ABC was introduced and has since been implemented by many large companies (Needy, Nachtmann, Roztock, Warner, & Bidanda, 2003).

- At the beginning of the 21st century, due to the need for competition, businesses applied ABC because they realized the advantages it brings (Gunasekaran *et al.*, 1999). In addition, he also provides a model to apply ABC to businesses.

2.2 Concept

Activity-based costing (ABC), introduced and developed in the 1980s, is an accounting technique through which overhead costs are allocated to each cost object on the basis of benefits obtained from indirect activities... This technique emphasizes on showing the relationship between costs and activities that create costs. ABC is highly valued because it is defined by the established relationship with the direct activities of the enterprise with the final priced products. When referring to the concept of activity-based cost accounting (ABC), there are many different views depending on the approach and researchers have different perspectives on the activity-based cost accounting method. Activity (ABC). Therefore, up to now there is still no unified concept of activity-based costing (ABC) method. Below are some basic views on the activity-based costing (ABC) method of researchers:

According to Krumweide and Roth (1997), activity-based costing (ABC) is a management accounting method that focuses on measuring costs, activities, products, customers and cost objects, is a method of allocating costs to cost objects based on the number of activities used by that cost object.

According to Horngren *et al* (2003), ABC accounting is an improvement of traditional cost accounting methods by focusing on specific activities as basic cost objects. Mohan and Hemantkumar said that ABC accounting is an accounting method used to measure the costs and results of activities, resources and cost objects. ABC accounting allocates resources to activities and from activities to cost objects based on usage level, while recognizing the cause and effect relationship of cost allocation criteria with activities. Dynamic.

According to the World Alliance for Advancement in Manufacturing (CAM-I): ABC accounting is a method of gathering financial and non-financial information associated with necessary activities in an enterprise. to produce products, to measure costs and performance levels of activities related to the cycle and cost objects; allocating operating costs based on their use of resources, allocating costs to cost objects such as customers, products, and processes based on their usage; Find cause and effect relationships to determine criteria for distributing activities. Thus, costs are allocated to products based on the level of consumption of activities necessary to produce those products.

Maher and colleagues (2006) said that ABC accounting is an activity-based management tool. First, costs are allocated to activities, then allocated to each product and service based on activities in which the product or service is consumed.

ABC accounting provides information about activities and the resources needed to carry them out. Therefore, ABC accounting is not simply a cost allocation process but also changes managers' thinking from cutting costs to enhancing business value.

In summary, ABC accounting is considered one of the most important innovative methods in cost calculation and management accounting; is the most effective cost determination and activity-based cost analysis tool. This is a cost allocation model based on allocation criteria associated with the source (activities) that generate costs. According to this method, calculating costs and controlling activities involves the use of invested resources and the valuation of outputs. Resources will be identified for each activity, each activity is a cost object. Finally, costs will be allocated to products according to criteria appropriate to each cost-generating activity.

2.3 Characteristic

Production and non-production costs can be included in product costs on the basis of cause and effect relationships.

In ABC, in addition to production costs, some non-production costs related to sales, distribution and management are also included in the product cost. For direct costs outside of production (commission costs paid to sales staff, transportation costs and warranty repair costs, etc.), the activity-based cost accounting (ABC) system will calculate directly into the product price. For indirect costs other than production, the activity-based costing (ABC) system will allocate them to products if these products cause those costs. Some production costs can be eliminated and not included in the product price.

In a traditional cost accounting system, all manufacturing costs are included in product costs, even costs not caused by the products.

In ABC, factory maintenance costs and idle capacity costs are not allocated to products. The costs of maintaining workshop operations (costs such as the salary of the workshop security guard, the salary of the workshop director and the cost of stationery at the workshop, etc.) are not included in the product cost because they are Completely unaffected by the production of products during the period. Idle capacity costs are production costs that have been incurred but are not fully used to produce products. For example, when the estimated number of products produced decreases, the unit price allocates general production costs to each product will increase and all products produced during the period must bear the full cost of this cost according to traditional cost accounting.

But according to ABC, this excess cost will be excluded and not included in the product price. There are multiple overhead cost pools, each of which is allocated to products and other cost objects using separate activity measures.

In ABC, an activity is understood as any event that causes a general drain on resources. An activity cost group is a group of activities in which the costs incurred in the group are aggregated and related to a specific activity measure (order processing cost group, design cost group). Product design...). Activity measures are the basis for allocation (allocation criteria) of overhead costs. The two most common activity measures are the number of executions and execution time.

With the allocation of indirect costs to cost objects based on criteria causes costs, so the cost and price information

provided by the activity-based costing method (ABC) will be more accurate than the traditional cost accounting method, thus supporting administrators in making decisions. Accurate decision in choosing product structure, deciding selling price, deciding to enter the market of new products...

Activity-based costing (ABC) method collects costs according to each activity, thereby providing information. Information helps managers plan to better control costs for each activity, helps managers eliminate or minimize activities that do not add value, or eliminate products or services. Consumes too much of our resources business but not very effective.

Activity-based costing (ABC) method considers the cost structure in product and service prices monitor the causes of costs and the use of resources in the company, thereby helping managers accurately analyze the profitability of different products, service.

When using the activity-based costing method (ABC), the business's budget estimate will also be prepared for each activity, so it has a higher level of accuracy than budget estimates.

According to the traditional method. From there, it helps businesses proactively use financial resources and use financial resources more effectively.

The activity-based costing method (ABC) is not only used to calculate the cost of products and services, but it can also be applied to any department in the business to help the managers of that department decide. The most optimal decisions.

When businesses apply the activity-based cost accounting (ABC) method in cost management, it will require more resources than traditional cost accounting methods in terms of time and implementation costs. And operational human resources. In addition, the activity-based cost accounting (ABC) method also requires close coordination of many departments and divisions within the business, which is an obstacle that not all businesses are capable of. Can be done.

An issue that is considered an important limitation when applying the activity-based costing method (ABC) is that it is difficult to determine how many cost allocation criteria are appropriate for the business. Normally, cost allocation criteria are determined somewhat subjectively based on the analysis of each business and project design team, so the appropriateness of the selected allocation criteria depends on A lot depends on the qualifications of those involved in designing and implementing activity-based costing (ABC).

The activity-based costing method (ABC) only collects costs by activity without dividing into variable costs and fixed costs in the process of collecting costs and calculating prices of products and services because therefore, providing information for administrators' decision-making process in the short term will be limited.

Activity-based costing (ABC) is not suitable for businesses with production processes simple business, small product range and indirect costs account for a small proportion of total costs.

3. Compare activity-based costing (ABC) with traditional cost accounting

Similarities

Both activity-based cost accounting (ABC) and traditional cost accounting methods aim to determine costs, calculate the cost of a business's products and services, and provide cost information. Fees for managers at all levels in the

enterprise to use to make decisions.

The collection of direct costs for cost objects of both methods is the same, there is no difference. According to the two methods, direct costs such as raw material costs and public research costs are calculated directly for each cost subject.

Differences

Besides the similarities, the activity-based costing method (ABC) and the traditional cost accounting method have some differences shown in the following aspects:

Circumstances arise

The traditional cost accounting method was born in the years 1870 - 1920 when science and technology were not yet developed, the production process was simple, research costs accounted for a high proportion and indirect costs accounted for a low proportion in total cost. The traditional cost calculation method chooses the indirect cost allocation criterion, which is usually the number of labor hours or the number of operating machine hours, and any deviation in the allocation of indirect costs to products and services will not have a significant impact. Including the cost of products and services. Today, science and technology have developed rapidly, leading to drastic changes in the production process. If in the past, production relied mainly on labor, today production relies mainly on machinery, equipment and technology. Therefore, IT costs will gradually decrease and indirect costs will account for an increasingly higher proportion. In addition, natural resources are depleted, business resources are limited and fierce competition is increasing, both in the domestic market as well as the world market. In this context, administrators need to have accurate, appropriate, timely and detailed information for the decision-making process. Traditional cost accounting methods cannot meet this need and activity-based cost accounting (ABC) was born to overcome the disadvantages of traditional cost accounting methods. Activity-based costing (ABC) method was introduced by Cooper and Kaplan in 1980.

Cost collection object

According to traditional cost accounting methods, incurred costs are often grouped according to where the costs arise, or according to stages of the production and business process; then, allocate products and services to calculate costs for preparing financial reports. While according to the activity-based cost accounting (ABC) method, incurred costs are grouped according to the activities that give rise to costs, thereby aiming at two main purposes including accurate calculation of product costs. Products and services and provide timely and appropriate information for administrators to make decisions.

Allocation criteria

The difference between the two methods is also shown in the choice of resource allocation criteria. Traditional cost accounting methods simply allocate resources to products and services based on a selected allocation criterion such as: direct labor hours or direct labor costs. Does not pay attention to the relationship between allocation criteria and allocated resources. According to the activity-based costing (ABC) method, activity costs are gathered into groups or cost centers and then allocated to each activity using allocation criteria. Appropriately express the cause and

effect relationship and finally allocate operating costs to each product or service based on the level of operational use of that product or service.

Akyol and colleagues (2005) ^[1] compared the difference between product costs determined by activity-based costing (ABC) and traditional cost accounting methods. First, the authors will determine the product cost according to the traditional cost accounting method and then compare it with the results of calculating the product cost according to the activity-based cost accounting (ABC) method. The results show that there is a significant difference in product costs between the two methods when indirect costs account for a large proportion of total costs.

Costs of the business, this significantly affects the accuracy of product costs and in that case, if managers rely on cost information determined by traditional cost accounting methods, they may receive Misdetermination of product lines that actually bring profit to the business.

In addition, according to researchers, activity-based costing (ABC) provides more accurate information than traditional cost accounting methods. Traditional cost accounting methods use a group of indirect costs and are randomly allocated to cost objects on the basis of labor hours or machine hours, making it difficult to accurately determine costs for each object. In the activity-based cost accounting (ABC) method, all indirect costs are allocated to cost objects according to appropriate criteria and based on the activity usage level of each bearer. Costs should be favorable and help administrators evaluate performance and control costs of departments in the business.

Scope of application

Traditional cost accounting methods and activity-based cost accounting (ABC) methods can be applied to all types of businesses, all production processes or service provision from simple to complex. Are all applicable. However, in terms of efficiency, the activity-based costing method (ABC) is more effective in businesses with the following characteristics: indirect costs account for a large proportion in the cost structure.; Diverse and diverse business products and services; Types of products and services require different technical requirements and service levels; Production and business processes are complex and there are frequent changes between types of products and services.

4. Content and sequence of implementation of the activity-based cost accounting system

4.1 Content

ABC accounting is built on the following theory: Resources are assigned to activities whose uses incur costs, which in turn are performed to generate costs. Products, services... (Objects subject to fees). Therefore, when the activities of an enterprise are identified, costs will be allocated to activities (activity centers) based on resource allocation criteria. Then, costs are allocated, or traced, from activity cost combinations to products and services according to the proportion of demand for each activity of each product. Allocation models according to cause and effect relationships can be established between cost objects and sources force.

The important point in the activity-based costing (ABC) model is that activities consume resources, those activities create costs while outputs are formed from the use of

activities. The basic idea of this model is to measure the resource consumption of the cost object. This is done in a two-step process: (1) measure the resource consumption of activities and (2) allocate activity costs to cost objects (products, services). Thereby, not only direct costs, but also indirect costs related to the consumption of activities of the cost object are considered. Review.

In the first step of ABC accounting, costs are assigned to the appropriate activity centers to determine total activity costs. In the next step, the cost of the product or service (cost subject) is determined based on relevant cost allocation criteria. Specifically, after determining the source of costs, combined with data on the level of consumption of activities of each product type, we will determine the corresponding allocation ratio for each type of product or service. Service at a determined rate there.

To perform the above steps is an extremely important task that has a decisive influence on whether the application of ABC accounting achieves the desired effect or not, which is the accurate collection and processing of information. Only when there is full information believe about socks chief the active dynamic, source force then job set next, build build development declare next ABC math is effective. This is very necessary work to achieve cost accuracy of the final cost subjects together.

4.2 The order of execution

Implementing activity-based costing (ABC) in an enterprise includes the following 5 basic technical steps:

- Determine implementation goals.
- Building a deployment team.
- Determine the list of activities, groups of main activities and calculate costs for each activity.
- Determine secondary allocation criteria.
- Allocate operating costs to cost subjects.

5. Conclusion

The article has presented basic theoretical issues about activity-based cost accounting systems in manufacturing enterprises. This article compares traditional cost accounting methods and activity-based cost accounting methods. In addition, the authors also present the content and procedures for implementing an activity-based cost accounting system in manufacturing enterprises. Through the presented theoretical basis, future studies can be used to evaluate the current status of applying activity-based cost accounting systems in manufacturing enterprises.

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